



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,089	08/22/2001	Naoyuki Mochida	33871	9338

116 7590 12/08/2005

PEARNE & GORDON LLP  
1801 EAST 9TH STREET  
SUITE 1200  
CLEVELAND, OH 44114-3108

EXAMINER

WOZNIAK, JAMES S

ART UNIT	PAPER NUMBER
----------	--------------

2655

DATE MAILED: 12/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/935,089

Applicant(s)

MOCHIDA ET AL.

Examiner

James S. Wozniak

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. In response to the office action from 6/1/2005, the applicant has submitted an amendment, filed 9/21/2005, amending claim 2, while canceling claim 1 and arguing to traverse the art rejection based on the limitation regarding a continuation monitoring timer (*Amendment, Pages 10-12*). Applicant's arguments have been fully considered, however the previous rejection is maintained due to the reasons listed below in the response to arguments.

2. Based on the amendments to claim 2, the examiner has withdrawn the previous objection directed towards a lack of proper antecedent basis.

### *Response to Arguments*

3. Applicant's arguments have been fully considered but they are not persuasive for the following reasons:

With respect to **Claim 2**, the applicant argues that Hatono (*U.S. Patent: 5,914,936*) fails to teach a timer for judging whether a time period when a comparison result of a packet judging means exceeds a threshold value is continued over a predetermined threshold value (*Amendment, page 11*). The applicant further argues that the timer taught by Hatono counts until a buffer data

amount is below a second threshold and therefore, does not teach the ability to count whether a first threshold being exceeded is continued over a permissible time (Amendment, page 11).

In response to such arguments, the examiner notes that Hatono discloses that the first and second thresholds can be equivalent (*Col. 4, Lines 20-24*), thus effectively creating a single threshold level. Therefore, since Hatono teaches judging buffer congestion seriousness by the time from when a first threshold is exceeded and buffer data level is below a second and equivalent threshold (*Col. 4, Lines 3-24*), Hatono effectively teaches a means for determining the amount of time a buffer data amount exceeds a first threshold level in determining congestion seriousness, and when combined with the teachings of Kramer et al (U.S. Patent: 6,658,027), teaches the limitations recited in claim 2.

With respect to the applicants arguments regarding **claim 3** (*amendment, page 12*), see the response to arguments directed towards claim 2.

The dependent claims are argued as further limiting a rejected independent claims (*Amendment, page 11*), and thus, also remain rejected.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 2, 3, 4, 5/2, 5/3, 5/4/3, 6/2, 6/3, 6/4/3, 7/6/2, 7/6/3, 7/6/4/3, 8/7/6/2, 8/7/6/3, 8/7/6/4/3, 9/8/7/6/2, 9/8/7/6/3, 9/8/7/6/4/3, 10/9/8/7/6/2, 10/9/8/7/6/3, 10/9/8/7/6/4/3, 12/2, 12/3, 12/4/3, 13/2, 13/3, and 13/4/3** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al (*U.S. Patent: 6,658,027*) in view of Hatono et al (*U.S. Patent: 5,914,936*).

With respect to **Claim 2**, Kramer discloses:

A packet receiving unit for receiving a real-time information packet which is transmitted at a constant coding speed, while having a constant packet length (*receiver, Col. 3, Lines 31-52, and Fig. 1, Element 100*);

A jitter absorbing buffer for temporarily storing the real-time information packet received by said packet receiving unit; a decoding unit for decoding data stored in said jitter absorbing buffer (*jitter buffer, Col. 3, Lines 53-61, and Fig. 1, Element 120*);

Packet number judging means for measuring a total number of packets stored in said jitter absorbing buffer and for comparing said measured total packet number with a preset threshold value, (*detection of whether a jitter buffer is full, Col. 7, Lines 61-63*); and

Data discarding means for discarding either a portion or all of the packets stored in said jitter absorbing buffer (*Col. 5, Lines 51-67*).

Kramer does not specifically suggest a second threshold comparison, wherein the second threshold comparison is based upon a buffer overflow (exceeded threshold) occurring for a certain time period, however Hatono teaches the use of a timer and an elapsed time period in determining the seriousness of data congestion at a buffer (*Col. 10, Lines 30-42 and Col. 4, Lines 3-16*).

Kramer and Hatono are analogous art because they are from a similar field of endeavor in data transmission systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Kramer with the use of a timer in determining the degree of data congestion at a buffer to implement efficient buffer control when congestion occurs that cannot recover naturally by detecting such a condition through an elapsed time of exceeding a buffer threshold (*Hatono, Col. 4, Lines 3-16*).

With respect to **Claim 3**, Kramer recites:

A packet receiving unit for receiving a real-time information packet which is transmitted at a constant coding speed, while having a constant packet length (*receiver, Col. 3, Lines 31-52, and Fig. 1, Element 100*);

A jitter absorbing buffer for temporarily storing the real-time information packet received by said packet receiving unit; a decoding unit for decoding data stored in said jitter absorbing buffer (*jitter buffer, Col. 3, Lines 53-61, and Fig. 1, Element 120*);

Packet number judging means for measuring a total number of packets stored in said jitter absorbing buffer after a communication is commenced and for comparing said measured total packet number with a preset threshold value, (*detection of whether a jitter buffer is full, Col. 7, Lines 50-63*); and

Data discarding means for discarding either a portion or all of the packets stored in said jitter absorbing buffer (*Col. 5, Lines 51-67*).

Kramer does not specifically suggest a second threshold comparison, wherein the second threshold comparison is based upon a buffer overflow (exceeded threshold) occurring for a certain time period, however Hatono teaches the use of a timer and an elapsed time period in

determining the seriousness of data congestion at a buffer (*Col. 10, Lines 30-42 and Col. 4, Lines 3-16*).

Kramer and Hatono are analogous art because they are from a similar field of endeavor in data transmission systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Kramer with the use of a timer in determining the degree of data congestion at a buffer to implement efficient buffer control when congestion occurs that cannot recover naturally by detecting such a condition through an elapsed time of exceeding a buffer threshold (*Hatono, Col. 4, Lines 3-16*).

With respect to **Claim 4**, Kramer teaches the jitter buffer management system as applied to Claim 3, while Saito teaches the jitter buffer timer as applied to Claim 3.

With respect to **Claim 5**, Kramer further recites:

Data discarding means discards either a portion or all of the packets stored in said jitter absorbing buffer in the unit of a packet (*frame deletion, Col. 5, Lines 51-67, and Col. 7, Lines 61-63*).

With respect to **Claim 6**, Kramer additionally suggests:

Data discarding means discards either a portion or all of the packets stored in said jitter absorbing buffer in the unit of a byte (*discarding a frame portion, Col. 11, Line 66- Col. 12, Line 1*).

Although Kramer does not specifically suggest discarding a frame portion in the unit of a byte, the examiner takes official notice that a byte is a well-known subunit that comprises a data frame. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to delete a frame portion in the unit of a byte so as to provide a well-known data unit

for partial frame deletion, thus conserving additional valuable (speech) data that a frame may contain.

With respect to **Claim 7**, Kramer further recites:

Data discarded by said data discarding means corresponds to such data that may give a small adverse influence to a transmission quality when being discarded (*deletion of silence frames, Col. 4, Lines 16-34*).

With respect to **Claim 8**, Kramer additionally discloses:

Real-time information packet corresponds to a voice packet (*VoIP, Col. 3, Lines 53-61*);  
and

The data-discarding unit is comprised of: a non-voice portion-detecting unit for detecting a non-voice portion of voice information stored in said jitter absorbing buffer and a discarding unit for discarding either a portion or all of said detected non-voice portions; and said data discarding means discards only the detected non-voice portion when the data discarding operation is carried out (*voice activity detector and deletion of silence frames, Col. 4, Lines 16-34, and Col. 5, Lines 51-67*).

With respect to **Claim 9**, Kramer further recites:

Non-voice portion detecting unit notifies information as to such a non-voice portion which should be discarded within said detected non-voice portions to said discarding unit; and said discarding unit discards only said notified non-voice portion (*VAD sending a silence detection result to a jitter buffer manager, Col. 4, Lines 16-34, and Col. 5, Lines 51-67*).

With respect to **Claim 10**, Kramer additionally discloses:



Non-voice portion detecting unit divides said detected non-voice portion by using a block having a preselected fixed length as a dividing unit, and notifies such a block except for a head block thereof and a tail block thereof as said block which should be discarded to said discarding unit *(detecting and deleting only a silence portion from a frame, Col. 11, Line 66- Col. 12, Line 4, which would inherently require a silence portion dividing means. Also, since only a silence portion would be deleted, it would be inherent that the header and tail block of the frame would be retained.)*.

With respect to **Claim 12**, Kramer further discloses a low water mark relating to buffer underflow (Col. 6, Lines 19-32).

With respect to **Claim 13**, Kramer teaches the high water mark as applied to Claims 1-3. Upon exceeding the high water mark frames are deleted until the mark exceeding condition is eliminated (Col. 5, Lines 36-67).

6. **Claims 11/2, 11/3, 11/4/3**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al (*U.S. Patent: 6,658,027*) in view of Hatono et al (*U.S. Patent: 5,914,936*), and further in view of Saito et al (*U.S. Patent: 5,541,926*).

With respect to **Claim 11**, Saito further teaches the insertion of dummy data for deleted frames in a jitter buffer (*Col. 9, Lines 39-52*).

Kramer and Saito are analogous art because they are from a similar field of endeavor in data transmission systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Kramer in view of Hatono with the

dummy data insertion means as taught by Saito in order to replace deleted data (Col. 4, Lines 7-11), thus preventing any data discontinuities.

### *Conclusion*

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

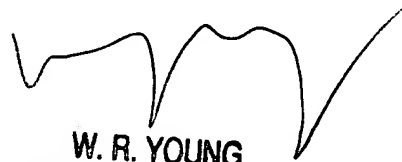
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2655

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak  
11/3/2005



W. R. YOUNG  
PRIMARY EXAMINER